



Date: May 25, 2021

To: Board of Directors and Executive Staff
Colorado Fire and Police Pension Association (FPPA)

From: Gabriel, Roeder, Smith & Company

Re: **State Funding of the Statewide Death and Disability Plan for Pre-1997 Hires**

GRS was asked to perform an analysis on the sufficiency of the lump sum appropriation in 1997 from the State based on actual plan experience to date and current assumptions to determine liabilities. The lump sum was expected to provide future benefits for members hired before 1997.

The analysis estimates a funding shortfall of **\$31 million** based on actual experience through January 1, 2021 and using assumptions consistent with the actuarial valuation as of January 1, 2021.

This amount will continue to grow with interest from January 1, 2021. Using 7% interest from this date, the estimated funding shortfall grows to **\$33 million** as of January 1, 2022 and **\$35 million** as of January 1, 2023.

An exhibit is included in the Appendix showing the actual evolution of the actuarial value of assets since January 1, 1997 for the aggregate plan (both pre- and post-1997 hires), as well as the estimated roll forward using only cash flows associated with pre-1997 hires.

Assumptions and Approach

Prior to January 1, 1997, the Statewide Death and Disability Plan was funded entirely through State contributions. After that date, the Plan has been funded through employee contributions by members hired on or after January 1, 1997. The State made one last lump sum contribution of \$39 million in 1997 which, when combined with assets at the time and expected future investment earnings, was intended to be able to provide for both retirees already in payment status at the time, as well as future death and disability payments for the actives hired before January 1, 1997. The payment was projected to fund the guaranteed 3% cost-of-living-adjustment payable for benefits associated with total disability status, but was not intended to fund ad hoc cost-of-living adjustments for other benefits

We started with the actuarial value of assets as of January 1, 1997 and used historical valuation census data to estimate the benefit payments paid to participants hired prior to 1997. In order to avoid incorporating ad hoc COLAs granted since 1997, we used the first benefit level available in the historical data for any records not associated with total disabilities. Any records that included a start or stop date during the year were prorated accordingly.

Using these estimated benefit payments associated with the pre-1997 and actual investment returns during the years, we rolled forward the actuarial value of assets to January 1, 2021. Expenses were assigned based on a proration of actual administrative expenses comparing estimated pre-1997 benefit payments to total benefit payments. No post-1997 contributions were incorporated into the roll-forward as those contributions were all associated with post-1997 membership. The rolled forward asset value as of January 1, 2021 was \$162 million.

GRS then isolated the present value of benefits associated with pre-1997 hires from the valuation results as of January 1, 2021. This amount was \$189 million. We also prorated the present value of administrative costs from the valuation results as of January 1, 2021 using the proportion of the present value of benefits attributable to pre-1997 hires and determined this amount to be \$4 million.

The net result is that State funding through 1997 (including the lump sum) resulted in an estimated funding shortfall of **\$31 million** based on actual experience through January 1, 2021 and using assumptions consistent with the actuarial valuation as of January 1, 2021.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The actuarial assumptions and methods, financial data, and participant census data utilized in these calculations are the same actuarial assumptions and methods, financial data, and participant census data used in the Actuarial Valuation as of January 1, 2021, except as otherwise noted.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Joseph Newton and Dana Woolfrey are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This communication shall not be construed to provide tax advice, legal advice or investment advice.

Appendix
Statewide Death and Disability Plan
Fire and Police Pension Plan of Colorado
Asset Roll Forward Using Cash Flows Associated with Pre-1997 Hires
\$ in thousands

Cash Flows for the Statewide Death and Disability Plan During Calendar Years 1997 through 2020						Roll Forward of Assets Using Only Estimated Cash Flows Associated with Pre-1997 Hires			
Year Ending December 31,	Contributions for the Year	Benefit Payments	Expenses	External Cash Flow for the Year	Actuarial Value of Assets	Benefit Payments	Expenses	Actuarial Value of Assets	
1996	\$ N/A	\$ N/A	\$ N/A	\$ N/A	\$175,364	\$ N/A	\$ N/A	\$175,364	
1997	215	(5,755)	(626)	(6,166)	193,630	(5,708)	(621)	193,456	
1998	715	(6,208)	(722)	(6,215)	212,357	(6,177)	(718)	211,434	
1999	1,295	(6,836)	(768)	(6,310)	229,537	(7,051)	(793)	226,890	
2000	2,058	(7,855)	(784)	(6,582)	240,576	(7,682)	(767)	235,782	
2001	3,019	(8,737)	(746)	(6,465)	239,456	(8,510)	(727)	231,751	
2002	4,071	(9,750)	(794)	(6,473)	218,152	(9,103)	(741)	207,665	
2003	4,983	(10,796)	(821)	(6,634)	212,273	(10,015)	(762)	197,600	
2004	5,866	(11,116)	(856)	(6,105)	223,389	(10,244)	(789)	202,378	
2005	7,093	(11,856)	(1,584)	(6,347)	249,299	(11,203)	(1,496)	218,393	
2006	8,285	(13,007)	(1,796)	(6,518)	274,092	(11,803)	(1,630)	231,897	
2007	9,902	(13,742)	(2,102)	(5,942)	300,643	(12,156)	(1,860)	244,834	
2008	10,963	(14,887)	(2,192)	(6,116)	257,279	(13,131)	(1,933)	200,067	
2009	11,957	(16,010)	(1,756)	(5,809)	266,478	(12,438)	(1,364)	197,662	
2010	12,259	(17,435)	(1,963)	(7,139)	281,577	(13,060)	(1,470)	199,236	
2011	12,813	(18,265)	(2,175)	(7,627)	290,988	(14,273)	(1,699)	194,995	
2012	13,612	(19,482)	(2,616)	(8,486)	305,455	(15,325)	(2,058)	192,526	
2013	14,570	(21,052)	(3,669)	(10,151)	325,181	(15,787)	(2,751)	192,215	
2014	15,509	(22,720)	(3,791)	(11,003)	345,009	(15,391)	(2,568)	191,929	
2015	16,938	(24,097)	(4,247)	(11,406)	361,070	(15,524)	(2,736)	188,466	
2016	18,216	(26,188)	(4,456)	(12,427)	374,944	(15,967)	(2,717)	183,058	
2017	20,535	(28,157)	(5,604)	(13,226)	395,302	(16,620)	(3,308)	178,913	
2018	22,685	(30,273)	(5,496)	(13,085)	409,327	(16,485)	(2,993)	171,232	
2019	26,150	(32,233)	(5,453)	(11,536)	432,227	(16,476)	(2,787)	165,757	
2020	29,030	(34,185)	(5,472)	(10,626)	\$463,247	(16,065)	(2,572)	\$162,381	